

Ancon 25/14 Restraint System

The Ancon 25/14 Restraint System ties an outer leaf of brickwork to a light steel frame.

Self-drilling, high-thread screws fix through the channel and the insulation and into the steel. Ancon SD25 wall ties are located in the channel and built into the bed joints of the outer leaf of brickwork.

This system is suitable for use with rigid insulation up to a depth of 220mm and ROCKWOOL Rainscreen Duo Slab® up to 180mm. When using other semi-rigid or flexible insulations, an Ancon Compression Sleeve is required with the fixings.

This system has been independently tested by Lucideon and a CE Declaration of Performance is available to download from www.ancon.co.uk/CE.

System Components

25/14 Channel

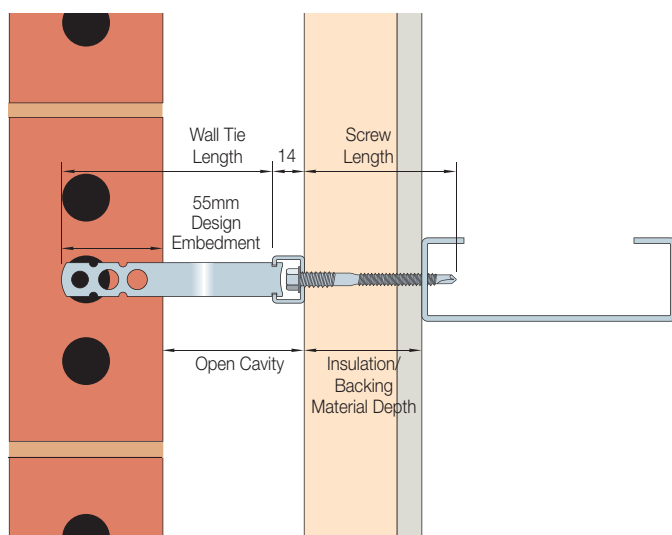
Lengths: 2700, 3000mm

High-thread Fixing Screws

Lengths: For an insulation depth up to 220mm

SD25 Wall Ties

Lengths: For open cavities up to 259mm



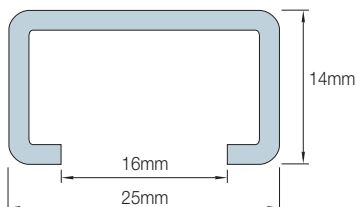
Warranty

Ancon provides a warranty on its stainless steel 25/14 system, guaranteeing the design performance for 60 years. When using our zinc plated fixing screws, a 25 year warranty is offered. Contact Ancon for full details and conditions.



Ancon 25/14 Channel

25/14 channel is available in lengths of 2700mm and 3000mm. It features pre-punched holes at close centres to ensure a fixing position is always located near the end, even when it is cut on site. The channel has a 16mm opening to easily accommodate a drive socket and washer for the fixing screws.



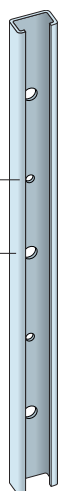
Ancon 25/14 Channel Profile

Ancon 25/14 channel features alternate 5.3mm and 9.5mm diameter holes to accept different fixings.

The smaller diameter holes should be used when fixing to steel or timber with Ancon High-Thread Screws.

The larger diameter holes are to accommodate fixings for concrete.

Note: Using the incorrect hole and fixing screw combination invalidates the system performance



Ancon High-Thread Fixing Screws

Screws are available to accommodate a combined backing board and insulation thickness of up to 220mm and a steel thickness from 1.2mm to 3mm. Ancon Fixing Screws feature a shaped drill tip of hardened steel that allows installation without pre-drilling. Drive sockets are available. See tables for correct screw reference and fixing centres.

Stainless Steel Fixing Screws

Insulation/Backing Material Thickness (mm)	Ancon Screw Reference	Screw Length (mm)
27-46	HTSS-65-2PT-W	65
35-61	HTSS-82-2PT-W	82
43-79	HTSS-100-2PT-W	100
60-94	HTSS-115-2PT-W	115
65-114	HTSS-135-2PT-W	135
80-129	HTSS-150-2PT-W	150
110-159	HTSS-180-2PT-W	180
165-220	HTSS-240-2PT-W	240

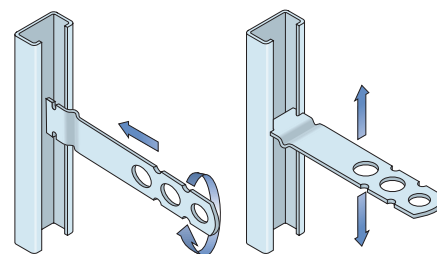
Notes: Suitable for rigid insulations up to 220mm and ROCKWOOL Rainscreen Duo Slab® up to 180mm, without an Ancon Compression Sleeve. Carbon steel screws are available. The Ancon 25/14 system is also suitable for fixing to timber and concrete. Contact Ancon for more details.

Ancon SD25 Wall Ties

Ancon SD25 wall ties are available in various lengths to suit open cavities from 35mm to 259mm. They are located in the channel by rotating through 90° and can be easily moved to the required position where they are built into the masonry bed joint. See tables for wall tie references and fixing centres.

Wall Tie Lengths/References

Open Cavity (mm)	Tie Length (mm)	Ancon SD25 Tie Reference
35-59	100	SD25/100
60-84	125	SD25/125
85-109	150	SD25/150
110-134	175	SD25/175
135-159	200	SD25/200
160-184	225	SD25/225
185-209	250	SD25/250
210-234	275	SD25/275
235-259	300	SD25/300



Recommended Wall Tie and Fixing Screw Vertical Centres, Based on 25/14 Channel at 600mm Horizontal Centres

Tie Type	Insulation Type ¹	Insulation Thickness ¹ (mm)	Vertical Tie Spacing (mm)	Vertical Fixing Spacing (mm)
1	Rigid	Max 220	300	225
2	Rigid	Max 220	450	337.5
3	Rigid	Max 220	450	337.5/450*
4	Rigid	Max 220	450	337.5/450*
1	ROCKWOOL Rainscreen Duo Slab®	Max 180	300	225
2	ROCKWOOL Rainscreen Duo Slab®	Max 180	450	337.5
3	ROCKWOOL Rainscreen Duo Slab®	Max 180	450	337.5/450*
4	ROCKWOOL Rainscreen Duo Slab®	Max 180	450	337.5/450*

Notes: Centres shown achieve equivalent tie type performances to PD 6697 6.2.2.5 Table 12 (M2 Mortar).

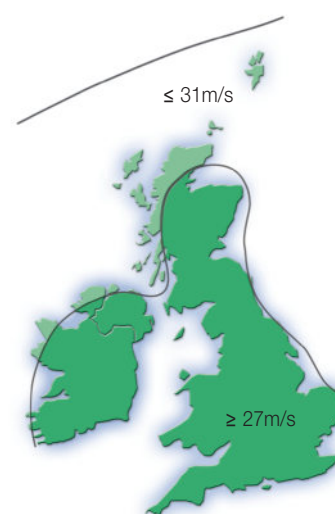
**337.5mm centres for insulation thicknesses greater than 114mm*

Wall Tie Types

Required Wall Tie Type	Application	Maximum Building Height (m)	Geographical Location
Type 4	Light duty tie, suitable for box-form domestic dwellings	10	Suitable for flat sites in towns/cities where basic wind speed does not exceed 27m/s and altitude is not more than 150m above sea level
Type 3	Basic wall ties, suitable for residential and small commercial buildings	15	Suitable for flat sites where basic wind speed is up to 27m/s and altitude is not more than 150m above sea level
Type 2	General purpose tie, suitable for residential and small commercial buildings	15	Suitable for flat sites where basic wind speed is up to 31m/s and altitude is not more than 150m above sea level
Type 1	Heavy duty tie, suitable for most building types	Any height	Suitable for most sites. However, for relatively small or unusually shaped buildings in vulnerable areas, tie provision should be calculated

Notes: Refer to PD 6697: 2010 and BS EN 1991-1-4: 2005 for complete information.

1. This system can be used with other, more flexible, insulation materials, up to 220mm thick, by introducing an Ancon Compression Sleeve (the same length as the insulation depth) around the fixings.



Wind Speed Map from BS EN 1991-1-4: 2005



Ancon Building Products

President Way, President Park, Sheffield S4 7UR • Tel: +44 (0) 114 275 5224 • Email: info@ancon.co.uk • www.ancon.co.uk



Ancon 25/14 Restraint System

The Ancon 25/14 Restraint System ties an outer leaf of brickwork to a concrete frame.

Screws fix through the channel and a stainless steel compression sleeve, located in the insulation, and into a pilot hole in the concrete. Ancon SD25 wall ties are located in the channel and built into the bed joints of the outer leaf of brickwork.

This system has been independently tested by Lucideon and a CE Declaration of Performance is available to download from www.ancon.co.uk/CE. It is suitable for use with all insulation types.

System Components

25/14 Channel

Lengths: 2700, 3000mm

Fixing Screws

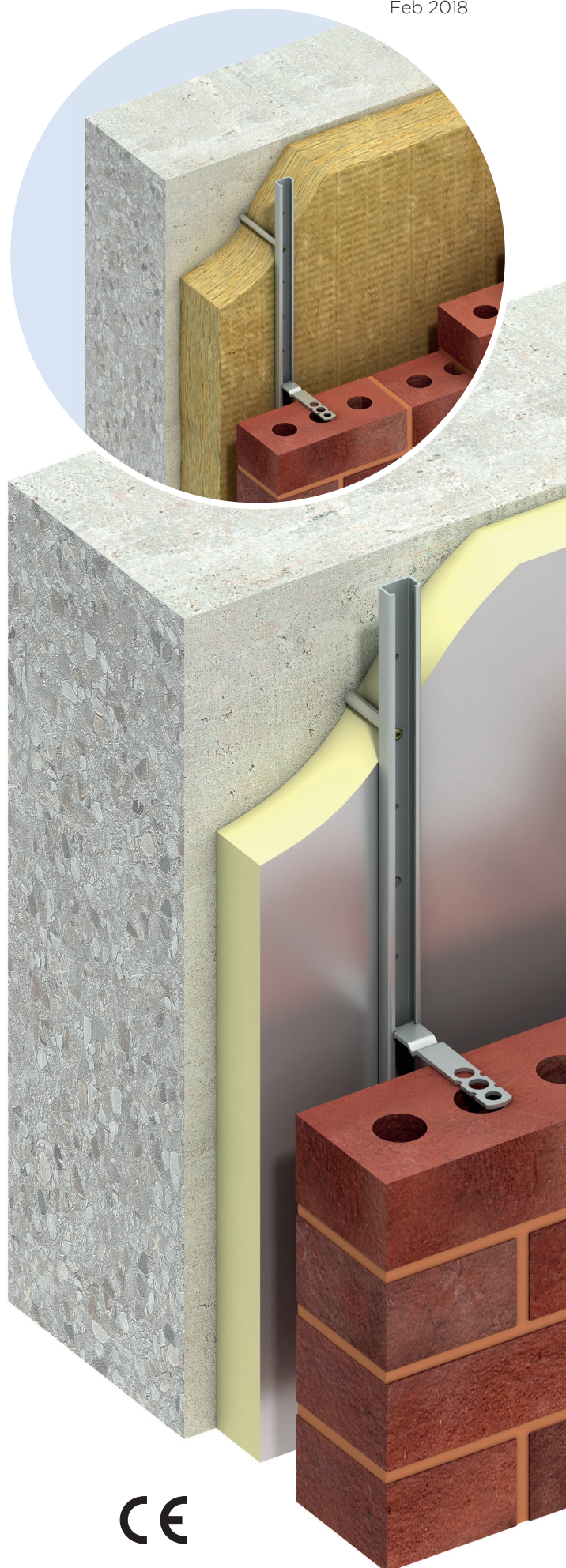
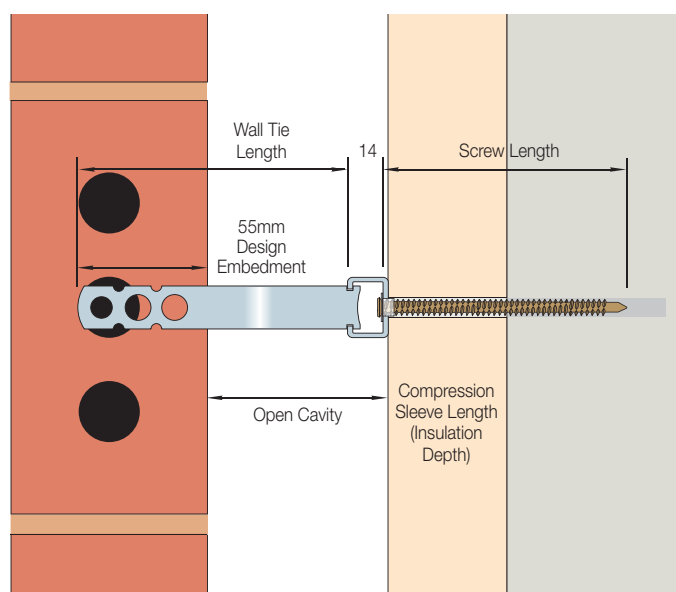
Lengths: For an insulation depth up to 267mm

Compression Sleeve

Lengths: To suit insulation depth

SD25 Wall Ties

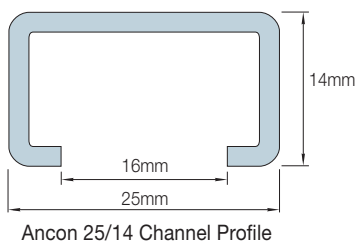
Lengths: For open cavities up to 259mm



CE

Ancon 25/14 Channel

25/14 channel is available in lengths of 2700mm and 3000mm. It features pre-punched holes at close centres to ensure a fixing position is always located near the end, even when it is cut on site. The channel has a 16mm opening to easily accommodate a drive socket and washer for the fixing screws.

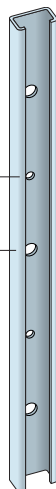


Ancon 25/14 channel features alternate 5.3mm and 9.5mm diameter holes to accept different fixings.

The smaller diameter holes should be used when fixing to steel/timber.

The larger diameter holes are to accommodate fixings for concrete.

Note: Using the incorrect hole and fixing screw combination invalidates the system performance



Ancon Concrete Fixing Screws

Screws are available to accommodate a combined backing board and insulation thickness of up to 267mm. A 6mm pilot hole is required. An Ancon Stainless Steel Compression Sleeve, the same depth as the insulation, is required. See tables for screw references, technical specifications and fixing centres.

Concrete Fixing Screw Selection Table

Insulation Thickness (mm)	Ancon Screw Reference	Screw Length (mm)	Minimum Concrete Embedment (mm)	Pilot Hole Dia. x Depth (mm)
35-45	CFS100	100	50	6 x 60
45-55	CFS110	110		
55-65	CFS120	120		
65-75	CFS130	130		
75-95	CFS150	150		
95-125	CFS180	180		
125-145	CFS200	200	30	6 x 40
145-177	CFS212	212		
177-217	CFS252	252		
217-267	CFS302	302		

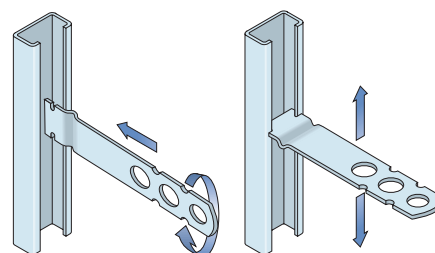
Notes: Zinc plated carbon steel screws. Supplied with nylon shoulder washers. For use with Ancon stainless steel compression sleeves as part of the 25/14 restraint system when fixing to concrete.

Ancon SD25 Wall Ties

Ancon SD25 wall ties are available in various lengths to suit open cavities from 35mm to 259mm (see selection table). They are located in the channel by rotating through 90° and can be easily moved to the required position where they are built into the masonry bed joint. See tables for correct tie references and fixing centres.

Wall Tie Selection Table

Open Cavity (mm)	Tie Length (mm)	Ancon SD25 Tie Reference
35-59	100	SD25/100
60-84	125	SD25/125
85-109	150	SD25/150
110-134	175	SD25/175
135-159	200	SD25/200
160-184	225	SD25/225
185-209	250	SD25/250
210-234	275	SD25/275
235-259	300	SD25/300



Recommended Wall Tie and Fixing Screw Vertical Centres, Based on 25/14 Channel at 600mm Horizontal Centres

Tie Type	Insulation Thickness (mm)	Vertical Tie Spacing (mm)	Vertical Screw Spacing (mm)
1	Max 267	300	225
2	Max 267	450	337.5
3	Max 267	450	337.5/450*
4	Max 267	450	337.5/450*

*Notes: Centres shown achieve equivalent tie performances to PD 6697 6.2.2.5 Table 12 (M2 Mortar). Min C20/25 Concrete. Ancon Compression Sleeves to be used with fixings. *337.5mm centres for insulation thicknesses greater than 114mm*

Wall Tie Types

Required Wall Tie Type	Application	Maximum Building Height (m)	Geographical Location
Type 4	Light duty tie, suitable for box-form domestic dwellings	10	Suitable for flat sites in towns/cities where basic wind speed does not exceed 27m/s and altitude is not more than 150m above sea level
Type 3	Basic wall ties, suitable for residential and small commercial buildings	15	Suitable for flat sites where basic wind speed is up to 27m/s and altitude is not more than 150m above sea level
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Type 1	Heavy duty tie, suitable for most building types	Any height	Suitable for most sites. However, for relatively small or unusually shaped buildings in vulnerable areas, tie provision should be calculated

Notes: Refer to PD 6697 and BS EN 1991-1-4: 2005 for complete information.

